

3/29/2013

78FR 1933D

PUBLIC SUBMISSION

24

As of: May 14, 2013
Received: May 12, 2013
Status: Pending_Post
Tracking No. 1jx-85am-9rjc
Comments Due: May 13, 2013
Submission Type: Web

Docket: NRC-2011-0148

Strata Energy, Inc., Ross In-Situ Uranium Recovery Project, Crook County, Wyoming; Notice of Materials License Application, Opportunity to Request a Hearing and to Petition for Leave to Intervene, and Commission Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information for Contention Preparation

Comment On: NRC-2011-0148-0007

Supplemental Environmental Impact Statement for the Ross In-Situ Uranium Recovery Project in Crook County, Wyoming

Document: NRC-2011-0148-DRAFT-0027

Comment on FR Doc # 2013-07332

Submitter Information**Name:** Shannon Anderson**Address:**

934 N. Main St.
 Sheridan, WY, 82801

Submitter's Representative: Shannon Anderson**Organization:** Powder River Basin Resource Council

RECEIVED

2013 MAY 14 PM 10:06

RULES AND DIRECTIVES
BRANCH
USFSC**General Comment**

See attached file(s)

Attachments

2013 5-13 Strata DSEIS Comments

SUNSI Review Complete
 Template = ADM - 013
 E-RIDS= ADM-03
 Add= *J. Moore (Jamsy)*



Submitted electronically via regulations.gov

May 13, 2013

Cindy Bladey, Chief
Rules, Announcements and Directives Branch
Division of Administrative Services
Office of Administration
Mail Stop TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

RE: Environmental Impact Statement for the Ross ISR Project in Crook County, Wyoming,
Regulations.gov Docket ID NRC-2011-0148

Dear Ms. Bladey,

Thank you for the opportunity to submit comments on the Nuclear Regulatory Commission (NRC)'s Draft Environmental Impact Statement (DEIS) for the Ross In Situ Recovery (ISR)¹ Project.

As you are aware, our organization has been actively engaged in the NRC's review of the Ross ISR project proposed by Strata Energy, Inc. (Strata). We are an intervening party in the licensing process. Through that process, along with our co-intervening party the Natural Resources Defense Council, we have brought forward significant and well-supported concerns documenting that approval of Strata's application will not appropriately protect public health and safety and the water resources of the State of Wyoming. A hearing about our concerns is not scheduled until June 2014; however, in the meantime, NRC stands ready to move forward with finalizing its EIS and license for the Ross Project. We ask that NRC pause its license approval process to take the necessary time to fully consider our concerns previously raised with the agency and comments discussed below. We believe that NRC must significantly revise this DSEIS and re-release it to the public for notice and comment.

I. The EIS improperly tiers to the Generic Environmental Impact Statement

As numerous comments from members of the public, agencies, and government officials pointed out several years ago, the GEIS (both draft and final versions) was a seriously flawed NEPA document. Those comments need not be repeated here, but should be taken into full account by the NRC in responding to public comments on this DSEIS and should be included in the Administrative Record related to the Ross ISR Project because the Ross ISR Project EIS "tiers" to and "supplements" the GEIS.

¹ For the purposes of these comments, the terms ISR and ISL (in situ leach) are used interchangeably.

Because of the deep flaws in the GEIS, NRC's reliance on it here is problematic – if not illegal.

According to NRC, the “SEIS supplements the GEIS, published as a final report in June 2009.” DSEIS at 1-3. However, as this statement clarifies, the GEIS is merely a report. It was never issued as a final NEPA document with an official Record of Decision. In a meeting with NRC staff on June 30, 2009, NRC staff told participants (including our organization) that “the GEIS does not make a final binding decision.” In fact, if it was a final decision, we note the NRC – according to its own regulations – should have issued a record of decision. *See* 10 C.F.R. § 51.102(a) (“A Commission decision on any action for which a final environmental impact statement has been prepared shall be accompanied by or include a concise public record of decision.”)

However, in this “supplemental” document,² the NRC acts as if the GEIS was a final NEPA document because it “tiers from, and incorporates by reference, the GEIS relevant information, findings, and conclusions concerning environmental impacts.” DSEIS at 1-5. The NRC fully acknowledges that the GEIS “provides a starting point for NRC’s NEPA analyses,” DSEIS at 1-4.

More troubling is that certain aspects of the GEIS appear to be binding upon the SEIS, including the evaluation of the significance of major impact areas, including water resources (see Section II of our comments *infra*). The SEIS adopts the GEIS’s framework of “small” “moderate” and “large” impacts without explanation as to whether this framework has any scientific validation or is still accurate given the unique site specific impacts of the Ross Project. *See* DSEIS at 1-5 (“the GEIS provides criteria for each environmental resource area...[and] [t]he NRC staff applied these criteria to the site-specific conditions at the proposed Ross Project.”

Additionally, as discussed below, by “provid[ing] a starting point for NRC’s NEPA analyses” the GEIS undermines the agency’s ability to properly assess impacts to resources, especially water resources. The DSEIS includes information and conclusions from the GEIS related to water resource impacts – ignoring the breadth of public comment against the GEIS in the process – and, as a result, the NRC comes to the same flawed conclusion that the GEIS did – that impacts to water resources will be “small.”

The NRC needs to – for once and for all – permanently shelve the GEIS. The NRC should start from scratch in this project EIS to properly analyze impacts to the environment and public health. In particular, NRC needs to fully consider and respond to comments from agencies,

² From a legal standpoint, NRC’s use of the word “supplemental” appears to be misplaced. A SEIS is required if “[t]here are substantial changes in the proposed action that are relevant to environmental concerns.” 10 C.F.R. § 51.72. However, the GEIS did not propose any actions and instead analyzed uranium mining in the abstract. Additionally – if anything – the DSEIS repeats time and again that impacts of the Ross Project will be similar to those analyzed in the GEIS. In fact, there are few differences between the analysis contained in the GEIS and the Ross Project SEIS (or the predecessor SEISs for the Lost Creek, Moore Ranch, and Nichols Ranch projects). It is difficult to know what the “changes in the proposed action” are that allow the Ross Project to be a supplement to the GEIS under NEPA. The Ross ISR project EIS is more appropriately just that – a project level EIS. It could, in theory, tier to a programmatic EIS that discussed the Ross ISR project as part of a reasonably foreseeable development scenario analyzed in that higher-level programmatic EIS, but the GEIS was “generic” not “programmatic” in analysis. (See our organization’s comments on the Draft GEIS).

government officials, and the public regarding the deficiencies of the GEIS and concerns about its application to site-specific uranium licenses. *See* 10 C.F.R. § 51.71(b) (a draft EIS must “contain an analysis of significant problems and objections raised by other Federal, State, and local agencies, by any affected Indian tribes, and by other interested persons.”).

II. NRC’s Reliance on the GEIS Prevents the Agency from Considering Contradictory Scientific Literature and Historical Experience at ISL Sites. In turn, the NRC’s Water Resources Impact Analyses are Not Based on Accurate Data.

NEPA requires “high quality” information and “[a]ccurate scientific analysis.” 40 C.F.R. § 1500.1(b); *See also Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). In NEPA, an agency must “insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” 40 C.F.R. § 1502.24.

NEPA requires an agency to candidly disclose the risks of its proposed action and to respond to adverse opinions held by respected scientists. The agency may not rely on conclusory statements unsupported by data, authorities, or explanatory information. An agency has acted arbitrarily and capriciously when it fails to make a reasoned decision based on an evaluation of the evidence.

Western Watersheds Project v. BLM, 552 F.Supp.2d 1113, 1129 (D. Nev. 2008) (internal citations and quotations omitted).

As documented by the wealth of scientific literature and historical experience (see attached documents), NRC has not met these basic requirements of NEPA. NRC’s conclusions contained within the DSEIS that impacts to water resources are “small” are conclusory and without basis. Specifically, the DSEIS directly contracts the 2007 USGS study prepared for the NRC that concluded “In-Situ leach mining techniques...tend to contaminate groundwater.” NRC/USGS, Consideration of Geochemical Issues in Groundwater Restoration at Uranium In-Situ Leach Mining Facilities, 2007 (attached).

In both the GEIS and the Ross ISR Project SEIS, the NRC’s conclusions that ground and surface water impacts will be small to moderate are premised on the assumptions that 1) ISL operations will implement and enforce “best management practices” (BMPs) and these BMPs will be effective in avoiding and minimizing impacts from excursions, spills and leaks; 2) groundwater restoration will be successful ; 3) groundwater contaminated with radioactive elements and heavy metals will be contained within the production zone during operations and after restoration; and 4) mining and restoration activities will not contribute to aquifer drawdown or depletion of water supplies. Available data and scientific research demonstrate that none of these assumptions are reasonable.

A. NRC underestimates the risk to water resources from excursions

The DSEIS discloses that excursions can occur at ISL sites, including the Ross Project:

Excursions can be caused by an improper water balance between injection and recovery wells, undetected high-permeability strata or geological faults, improperly plugged and abandoned exploration drillholes, discontinuity within the confining layers, poor well integrity, or unintended fracturing in the well zone or surrounding units.

DSEIS at 2-28. However, the DSEIS goes on to conclude that impacts related to these excursions will be minimized because of Strata's monitoring program that "would allow corrective action to be immediately taken to balance locally the injection and recovery flows or to shut down individual injection well(s) or the entire wellfield, as necessary." DSEIS at 2-30. NRC states that "During operations there would be a MODERATE impact to ore-zone aquifer water quality due to excursions; however with measures in place to detect and resolve the excursions, the impacts would be reduced." DSEIS at 2-52. NRC concludes that water impacts would "temporary"³ and "small" because excursions would be detected and corrected. DSEIS at 4-37.

Again, these conclusions (based on conclusions from the GEIS) are without sufficient basis and contradict the past experience and history at ISL sites in Wyoming and other states.

In information prepared for comments on the Moore Ranch and Nichols Ranch ISL projects, public interest organizations documented that in three ISL sites (2 in Wyoming, 1 in Nebraska), 88 wells were placed on "excursion" status. Excursions included both horizontal and vertical excursions. Four horizontal excursions lasted up to five years, and six vertical excursions lasted at least eight years.⁴ This information shows that excursions occur regularly at ISL facilities and the impacts of the excursions are rarely "temporary" because "best management practices" in place at the facilities do not serve to prevent and "immediately" correct excursions. NRC must fully evaluate the real possibility that Strata's Ross Project will have the same fate and the company will not be able to prevent or correct excursions as relied upon in the NRC's EIS. If Strata is proposing new mitigation or BMPs that will be different than other failed attempts at previous ISL sites, please explain what will be different and why it will be more effective than those used at other ISL sites.

Moreover, the likelihood of excursions at the Strata site is exacerbated from the presence of abandoned wells (see discussion below).

B. NRC underestimates the risk to water resources from spills and leaks

While the agency discloses that "failure of pipeline fitting or valves, or well mechanical-integrity failures, in shallow aquifers could result in spills or leaks of lixiviant" and these impacts could be moderate to large, DSEIS at 4-31, the NRC's reliance on the GEIS leads the agency to illogically conclude that the impact of potential surface spills will be small. DSEIS at 4-29. Here, as in the GEIS, the agency relies on "the Applicant's use of BMPs" to reduce impacts. *Id.*⁵ However, as in the GEIS, the NRC fails to discuss the efficacy of these BMPs and whether in fact they have

³ See 40 C.F.R. §1508.27(b)(7) ("Significance cannot be avoided by terming an action temporary").

⁴ Information on excursions at currently licensed ISL facilities is publicly available via the NRC's ADAMS system.

⁵ See also DSEIS at 4-32 to 4-34.

historically reduced impacts at other ISL facilities or whether they are likely to reduce impacts at Strata's Ross Project. To the contrary – the history of spills at ISL facilities in Wyoming and elsewhere demonstrate that spills are common and are often significant.

The quintessential treatise on spills and leaks related to ISL facilities is a 2007 investigation report from WY's Department of Environmental Quality:

Over the years there have been an inordinate number of spills, leaks and other releases at this operation. Some 80 spills have been reported, in addition to numerous pond leaks, well casing failures and excursions. Unfortunately, it appears that such occurrences have become routine. [DEQ] currently has two large three-ring binders full of spill reports from the Smith Ranch-Highland operations.

DEQ Notice of Violation and Investigation Report, Power Resources (now Cameco) (attached). The investigation showed that some of these spills were as large as 198,500 gallons. In response to the investigation, the DEQ levied a substantial fine against the company for decades' worth of problems. Nevertheless, spills and leaks remain routine at the Smith Ranch-Highland facilities to this day.⁶

Similarly, spill reports from the Irigaray/Christensen Ranch ISL project (now Uranium One's Willow Creek project) show that over the project's operating history, there have been nearly 100 leaks and spills dumping hundreds of thousands of gallons of contaminated water on the site. Even as recently as 2003, the Christensen Ranch project recorded a spills over 1,000 gallons and in 1999, it recorded a series of spills over three months totaling over 100,000 gallons.

However, rather than meaningfully evaluating the impacts of spills and leaks on water resources in the GEIS – or this site-specific EIS – the NRC simply makes sweeping pronouncements about the potential impacts, largely concluding that they will be small to moderate, again, basing that conclusion on BMPs that have not been effective at other ISL sites.

Rather than conducting a site-specific analysis of reasonably foreseeable impacts from spills and leaks at the Ross ISR project, the NRC simply states that site-specific conditions at the Ross ISR project are consistent with the description of the affected environment described in the GEIS and concludes that the impacts from spills and leaks on surface waters would be small. DSEIS at 4-29. This analysis, however, disregards the close proximity of mining operations of the Ross Project to surface water sources. As a result, the NRC evades any meaningful analysis of impacts on surfaces waters by endorsing site-specific analyses in the GEIS, and then simply incorporating the GEIS's analysis into the Ross Project SEIS, when presented with the opportunity to engage in a site specific analysis.

The NRC reaches a similar conclusion with respect to the impacts from spills and leaks on groundwater. The NRC's conclusion that impacts to groundwater from leaks and spills at the Ross ISR project will be small is just as unjustified as its conclusion about impacts on surface

⁶ See spill and incident reports available on ADAMS. See also <http://www.wise-uranium.org/upusawy.html> and <http://www.wise-uranium.org/umopuswy.html> (excerpts attached)

water because the NRC's conclusion that impacts on groundwater from leaks and spills will be small rests on the assumption that Strata will use effective mitigation measures.

As with its conclusions about the impacts from spills and leaks on surface waters, the NRC's conclusions about groundwater impacts completely disregard the operational history of all other ISL operations that have the same leak detection and well integrity programs as proposed for the Ross ISR project. This fundamental contradiction between actual operational data and the NRC's conclusions about the magnitude of impacts in both the GEIS and the SEIS is contrary to NEPA.

C. NRC underestimates the difficulty of “restoring” aquifers after ISL mining operations and does not disclose water impacts stemming from the failure to restore aquifers to pre-mining conditions

NRC underestimates the risk to water resources from the failure of ISL projects to restore water to baseline conditions. The DSEIS once again improperly relies on the false conclusions of the GEIS that ignores the past experience at ISL sites and a wealth of scientific literature and information. *See DSEIS at 4-39.*

Strata proposes to use the same restoration methods discussed in the GEIS: “The aquifer-restoration activities proposed for the Ross Project are the same as those methods described in Section 2.5 of the GEIS.” DSEIS at 2-33. Therefore, all of the critiques about the lack of effectiveness of these restoration techniques raised through the public comment process for the GEIS are applicable here.

The GEIS – and this EIS – illogically concludes that aquifers will be easy to restore within a matter of months. This conclusion in turn prevents the NRC from taking a hard look at impacts related to water quality or quantity impacts that will stem from Strata’s reasonably foreseeable difficulty in restoring aquifers to pre-mining conditions.

Strata “estimates that aquifer restoration for each wellfield would take approximately eight months,” DSEIS at 2-33, or even as little as six months, DSEIS at 4-34, depending on where you look in the DSEIS. Nevertheless, Strata’s estimate – that NRC fails to independently verify – is woefully smaller than past experience at ISL facilities.

Groundwater restoration remains difficult and has taken longer than expected at operating mines in Wyoming. (See attached Cameco restoration schedule (showing restoration of mine fields typically takes years, not months)). By illogically assuming that restoration of wellfields will take only a few months, the NRC ignores water quantity use and corresponding impacts related to much longer restoration periods typical of ISL facilities.

Moreover, while the DSEIS provides general descriptions of aquifer restoration techniques, the NRC fails to analyze which techniques would be deployed in which Strata wellfield for how long and does not differentiate between restoration techniques that will be employed at any of the 15-

25 estimated wellfields. The NRC's descriptions of restoration techniques that Strata will use are cursory at best. Importantly, the NRC does not discuss whether these techniques will be effective at actually restoring the groundwater to pre-mining conditions. This is perhaps because it is impossible for the NRC to make that conclusion because after years of trying, no mine field at a previous ISL site has ever been restored to pre-mining baseline water quality.

It is without a doubt that "To date, no remediation of an ISR operation in the United States has successfully returned the aquifer to baseline conditions. Often at the end of monitoring, contaminants continue to increase by reoxidation and resolubilization of species reduced during remediation; slow contaminant movement from low to high permeability zones; and slow desorption of contaminants adsorbed to various mineral phases." Otton & Hall, USGS, 2007 (attached).⁷

Stated another way: "No mining company using the ISL method has ever restored the underground water at a mine site to its original conditions. The only way a company has ever managed to officially call a site restored is by convincing the state or federal government to lower its standards." *Gallup Independent*, 7/16/07.⁸

The constituents that are typically left in higher concentrations post-mining are some of the worst around. Arsenic, selenium, uranium, vanadium and radium levels are often higher than before mining. Yet, nowhere in the DSEIS does NRC discuss the implications of having higher concentrations of these heavy metals and other constituents left in the aquifer after mining.

If anything, the past history of ISL sites and their failure to restore aquifers to pre-mining conditions – even after years of trying – demonstrates the need for the NRC to consider effective mitigation measures. Our organization has consistently asked the NRC to consider license requirements that would prevent bringing new wellfields into production until restoration is achieved at current operations. We renew those comments here, in relation to Strata's project.

III. The Failure to Disclose Baseline Water Quality Violates NEPA's Public Disclosure and Analysis Requirements

As fully discussed in our pleadings in the license intervention proceeding before the Atomic Safety Licensing Board, experts have pointed out numerous flaws in Strata's water sampling regime and have concluded that neither Strata nor NRC have properly put forward the correct and accurate data to determine baseline water quality. Those flaws, as stated in our pleadings and attached expert declarations, are incorporated by reference into these comments. The concerns

⁷ http://www-pub.iaea.org/MTCD/Meetings/PDFplus/2009/cn175/URAM2009/Session%204/08_56_Otn_USA.pdf

⁸ We acknowledge that the NRC allows for alternative concentration limits (ACLs) associated with ISL operations. We are not attacking the reliance upon that regulatory flexibility here. However, as discussed thoroughly in our contentions related to the license hearing process, NRC must fully disclose and analyze whether Strata will be able to achieve the primary restoration standards of restoring a wellfield to pre-mining baseline conditions, and if they cannot achieve those standards, what the environmental impacts of that failure will be.

must be fully addressed in the NRC's licensing process, including in its response to comments on the DSEIS.

Moreover – and perhaps even more importantly in the context of a NEPA document – the NRC fully acknowledges that baseline water quality has yet to be established and disclosed. This failure has to two important consequences: 1) the DSEIS cannot analyze or disclose impacts related to excursions because those yet-to-be-determined baseline water quality values will be used to determine whether excursions have occurred through Strata's monitoring program; and 2) the DSEIS cannot analyze or disclose impacts related to the failure (or even the unlikely success) of Strata to restore water quality to baseline conditions because the NRC does not yet know what those baseline restoration targets are.⁹

This analysis failure turns NEPA on its head – making the most important impacts analysis post-NEPA and *after* the agency has made its decision. In addition to violating a whole host of basic NEPA principles about the importance for up-front disclosure and analysis prior to the agency making its decision, the failure also violates NEPA's dual purpose of disclosing the information to the public to allow meaningful participation through the public comment process. Through NEPA, an agency "must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. § 1500.1(b). Here, the public is *prevented* from participating in NRC's NEPA process because we are left with nothing to comment on. We cannot comment on a void, and yet that is exactly what NRC wants us to do, in direct violation of NEPA.

IV. The NRC fails to disclose the scope of the Ross Project

The DSEIS states that Strata has proposed 15-25 wellfield areas with 1,400-2,000 recovery and injection wells. DSEIS at xix. Later, the EIS states that "The total number of wells would number between 750 and 1,000 based upon the Applicant's estimate of 40 recovery wells per each of 15-20 wellfield modules plus monitoring wells." DSEIS at 2-36.

Nowhere in the EIS does NRC state which number in this wide range it is using to assess impacts. A difference of 10 wellfields and 6,000 wells is quite substantial when considering impacts to land, water, and other resources in the area. NRC needs to disclose the "action" proposed and analyzed in its EIS.

How many wells and wellfields is the agency using to base its impacts analysis? Alternatively, if the agency is analyzing the Ross Project as a range, please disclose this and discuss how the range was considered in the range of alternatives considered and analyzed by the agency.¹⁰

⁹ "This post-licensing, pre-operational data set, which would be established for each wellfield prior to uranium recovery in that wellfield, would serve as a benchmark for the Applicant to determine whether an excursion has occurred (i.e. by way of the upper control limits (UCLs) established for that particular wellfield) and whether the ground water in a wellfield has been restored to respective target values." DSEIS at 3-96.

¹⁰ Of course, NRC must also fully consider the true scope of Strata's proposed project – the Lance District project – as discussed in Section VI to our comments, *infra*.

V. The NRC improperly rejected the North Ross Project alternative and the DSEIS fails to include a range of alternatives commensurate with NEPA's requirements

Alternatives consideration is the “heart” of the NEPA process, designed to allow the agency to consider options that will reduce impacts to the human environment. However, in this DSEIS, NRC considers a mere three alternatives, one of which is the legally required no action alternative. The only alternative that differs from the action proposed by Strata is alternative 3, the North Ross project.

The EIS at 2-45 details reasons why Strata rejected the North location, but the EIS also gives reasons why the alternative would reduce impacts to groundwater and surface water resources, including the Little Missouri. *Id.* and DSEIS at 4-24, 4-43. The EIS needs to fully disclose the rationales behind the NRC rejecting this reasonable – and perhaps more protective – alternative.

VI. The NRC Violated NEPA by Failing to Use the Lance District Project as the Scope of the EIS. Alternatively, the NRC failed to consider the Connected Actions of Four Other ISL Projects in this EIS.

As fully discussed in our pleadings related to the license intervention proceedings, and particularly in our recent motion to admit a new contention related to the DSEIS submitted on May 6, 2013, the NRC must consider Strata’s Lance District project as the project that it analyses in this EIS, not the smaller Ross Project. Short of doing so will illegally segment the NRC’s NEPA analysis and prevent up-front and public consideration of impacts related to the true scope of Strata’s project.¹¹

Strata is clearly proposing actions connected to the Ross Project. These actions are “connected” as defined under NEPA and thus should be considered and discussed in a single EIS. Pursuant to NEPA:

Connected actions...are closely related and therefore should be discussed in the same impact statement. Actions are connected if they: (i) Automatically trigger other actions which may require environmental impact statements; (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously; [or] (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.

40 C.F.R. § 1508.25(a).¹²

¹¹ See comments from the Natural Resources Defense Council for more on this topic.

¹² The federal courts use a “but for” or “independent utility” test for connected actions. *Thomas v. Peterson*, 753 F. 2d 754, 758-60 (9th Cir. 1985). If one project cannot proceed without the other project (i.e., “but for” the other project), or if the first project is not “independent” of the second project, the two projects are considered connected actions and must be reviewed in the same EIS. *Id.* “The purpose of this requirement is to prevent an agency from dividing a project into multiple ‘actions,’ each of which individually has an insignificant environmental impact, but which collectively have a substantial impact. ... The crux of the test is whether each of the two projects would have taken place with or without the other and thus had independent utility.” *Great Basin Mine Watch*, 456 F.3d at 969 (9th Cir. 2006).

Here, Strata's four additional ISL projects – the Ross Amendment Area 1, Kendrick Satellite Area, Richards Satellite Area, and Barber Satellite Area – will be “connected” to the Ross Project through common infrastructure, including a central processing facility at the Ross Project used for all future “satellite” facilities:

The Applicant proposes to construct and operate a single facility to serve the Ross Project as well as other potential ISR satellites (i.e. wellfields) within the Lance District. It could also process uranium-loaded resins from other ISR and water-treatment operations, which would be trucked into the facility.

DSEIS at 2-13. In fact, for a satellite facility to be approved as a license amendment (like Strata plans to do), the company “must show a strong connection [demonstrated through operational or hydrological connection] between the proposed additions or enhancements and the existing licensed operations.” NRC RIS 2009-14 (attached). An “operational connection” is defined as one that “demonstrate[es] that the new facility would not be functional without the existing facility. For example, an existing ISR licensee is proposing the addition of a new ISR/resin operation that will involve shipping the resin to the licensee’s operating CPP or ISR/yellowcake operation for further processing (satellite facility). Without the existing CPP, the new ISR/satellite would not be able to process the resins, and, thus, would not be able to produce the uranium.” *Id.*

Thus, the very connection that Strata must show under NRC guidance to “qualify” future facilities as “satellite facilities” – that without the common infrastructure of the CPP the future projects would not exist and the Ross Project CPP is being planned at a particular size to accommodate these future projects and would presumably be uneconomic at this larger size without these future projects – is the exact type of “operational” connection that CEQ regulations define as connected actions which should be analyzed in a single EIS.¹³

VII. The NRC fails to properly analyze impacts related to abandoned wells located in and around the Ross Project area

NRC has fully acknowledged the risk that abandoned wells create in ISL projects. For instance, in a report to the NRC, the USGS disclosed that “Older exploration holes in search of fossil fuels and uranium are difficult, if not impossible, to locate and many of them were improperly plugged and abandoned.” (NRC, 2007, attached). Correspondingly, “Improperly plugged, completed, or abandoned wells that go through both a mining area and fresh water can provide a way for mining liquids to move into fresh water.” *Id.*

The DSEIS does not sufficiently describe and analyze information about boreholes and aquifer isolation to demonstrate that fluids will be contained. Strata’s own data shows that over 5,000 exploration boreholes were drilled in the area, which can serve as pathways for fluid migration.

¹³ While NRC discusses some of the impacts related to these four future projects in its cumulative impacts section, the analysis of these impacts is nowhere near sufficient, as discussed below. Moreover, analysis of connected actions is a higher bar that NRC fails to meet in this EIS.

Yet, the DSEIS downplays this risk by stating that groundwater impacts would be “minimized by the Applicant locating the drillholes within the wellfields beneath the Proposed Action as well as plugging and abandoning them.” DSEIS at 4-36; *see also* DSEIS at 3-38 (“To prevent communication between aquifers during uranium-recovery operation, the Applicant proposes to actively locate and plug all exploration drillholes prior to beginning wellfield operations.”). Unfortunately, the DSEIS does not explain how Strata will either locate *all* of the abandoned wells or plug them in a manner that will prevent fluid migration. The agency glosses over the reality that thousands of abandoned wells are present in the area and that these abandoned wells “are difficult, if not impossible, to locate” and “can provide a way for mining liquids to move into fresh water.” (NRC, 2007).

What the DSEIS does disclose does not provide much comfort. According to the DSEIS, “As of October 2010, the Applicant has located 759 of the 1682 holes thought to exist from Nubeth exploration activity as has plugged 55 of them.” DSEIS at 2-44. This means that Strata has failed to locate over one-half of the wells “thought to exist” (not to mention the thousands more that are likely present in the area) and have only safely plugged 55 (or approximately 3%).

Moreover, Strata’s commitment to locate and plug *all* abandoned wells – however hollow that promise may be – is only related to wells “within the wellfields.” There is no discussion, analysis, or disclosure, of how abandoned wells immediately outside and adjacent to the wellfields could serve as pathways for mining fluid migration from the wellfields in the case of excursions of mining fluid from the minefields (which, as discussed above, are frequent events at ISL facilities).

Additionally, even if Strata was able to properly plug and abandon *all* wells, that mitigation does not negate NRC’s duties to take a hard look at the abandoned well issue in its EIS. See *Northern Plains v. Surf. Transp. Bd.*, 668 F.3d 1067, 1084-85 (9th Cir. 2011): (“[M]itigation measures, while necessary, are not alone sufficient to meet the [agency’s] NEPA obligations to determine the projected extent of the environmental harm to enumerated resources before a project is approved.”).

NRC must significantly revise its analysis of the risk of abandoned wells to water resources.

VIII. NRC fails to properly analyze and disclose cumulative impacts

While we are pleased to at least see a cumulative impacts section in the EIS (unlike the one that was lacking in the GEIS), the NRC’s analysis fails to properly consider the broad scope of cumulative impacts that will result from the Ross Project – and the four future ISL projects connected to the Ross Project. Importantly, the NRC fails to include any analysis of cumulative water quality impacts. The NRC gives a cursory look to cumulative impacts related to past projects, including the Nubeth R&D project, but does not consider any prospective cumulative water quality impacts related to Strata’s future projects.

IX. NRC does not disclose the current status of Strata's Aquifer Exemption Application

Strata's aquifer exemption has not yet been approved by EPA. NRC needs to disclose the status of the aquifer exemption process, fully describe the scope of the exemption (preferably through a map or diagram in the EIS), and explain how the exemption does or not affect how NRC determines and assesses impacts related to water quality and quantity. *See 10 C.F.R. § 51.71(c)* (a draft EIS "will list all Federal permits, licenses, approvals, and other entitlements which must be obtained in implementing the proposed action and will describe the status of compliance with those requirements.").

The NRC should also fully describe how the aquifer exemption will be expanded, or additional aquifer exemptions will be needed, to complete Strata's Lance District plans (which, as noted above, should be the scope of the proposed action analyzed by the NRC in this DSEIS).

Moreover, because the exemption has not yet been approved, the EPA considers all intra and inter-agency communications exempt from disclosure (see attached email from EPA Region 8). The NEPA process can only rely upon information disclosed to the public (see discussion above), and therefore until communications, memorandum, and agency analysis of the aquifer exemption are available for public review, none of those documents should be incorporated into NRC's NEPA analysis. *See 40 C.F.R. § 1502.21* ("No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment.").

X. NRC does not discuss the draft license requirements and how they will – or will not – mitigate impacts

Before this document was even released for public review and comment, the NRC essentially finalized the Strata NRC license. NRC met with Strata several times and negotiated license conditions with the company. While the license still remains in a "draft" form until the NEPA process is complete, the revisions and negotiations were not carried out under NEPA's public review and comment processes. The NRC acted prior to NEPA review, and by negotiating with the company, the agency has been locked into positions that would be difficult to reverse after NEPA. Again, this turns NEPA on its head because the agency is acting *prior* to fulfilling NEPA's twin purposes of informing agency actions and disclosing information to the public.

At the very least, NRC needs to re-release a new draft of the DSEIS with the draft license included as an appendix and its conditions fully discussed and analyzed throughout the text of the document. This is particularly important because the NRC license is the *only* source of binding and enforceable mitigation measures specific to Strata's project. Therefore, the license conditions should be the *only* source of mitigation relied upon by the agency to reduce impacts related to Strata's project.

XI. NRC does not disclose the consequences of minimal inspections and enforcement related to ISL projects in Wyoming, including the Ross ISR Project

NRC does not have an office in Wyoming and has inadequate staff to inspect ISL operations. In the EIS, NRC needs to explain how inspection and enforcement actions will take place and whether current staff levels are sufficient to fully inspect and enforce Strata's ISR facility. This is especially important because NRC's impacts conclusions rely on effective BMPs and mitigation measures.

We note that few fines have been levied over the years related to ISL facilities in Wyoming, even though, as described above, these facilities have routine license violations including excursions, spills, and leaks. This history does not give the public much hope in the NRC's inspection and enforcement actions.

XII. The SEIS does not meet BLM's requirements for NEPA analysis

While the DSEIS contains a "purpose and need" statement from the BLM, DSEIS at 1-3, no other mention of the BLM's approval process for the Ross ISR Project is included in the document. Although Section 1.7.3.1 of the DSEIS says that the NRC "coordinated" with the BLM, it does not appear as if the DSEIS was jointly prepared by both agencies as would be the case if the BLM was a full cooperating agency under NEPA. No one from the BLM is listed as a preparer of the EIS in Section 9 of the document.

In particular, there is no disclosure of whether the DSEIS is designed to comply with CEQ NEPA regulations, as would be required if the EIS was a document intended to meet BLM's NEPA requirements. The NRC has held that the agency does not fully comply with CEQ regulations as the agency only "gives deference" to CEQ regulations to the extent that they do not "have a substantive impact on the way in which the Commission performs its regulatory functions." Irrespective of whether NRC must meet the requirements of CEQ regulations, there is no doubt that CEQ regulations clearly apply to BLM's NEPA documents. If this is a joint agency document, it must fully comply with CEQ NEPA regulations. If it is not a joint document, please explain what NEPA analysis BLM will conduct and why the NRC and BLM choose to segment off that analysis from this analysis, which prevents either agency from conducting a true comprehensive hard look of the impacts related to the project.

XIII. The DSEIS does not disclose the lack of royalties related to the production of federal minerals

Federal uranium produced from Strata's Ross project – or any of its forthcoming satellite projects – will be mined under the 1872 General Mining Law. Please disclose that the mining of federal uranium reserves will not produce royalties to federal or state governments.

XIV. The DSEIS does not disclose impacts related to 11e2 byproduct disposal

The DSEIS lacks any discussion of impacts related to 11e2 disposal for either the Ross Project or future satellite projects. There is not a facility identified for disposal and no impacts identified.

Powder River Basin Resource Council Comments on the Ross ISR Project DSEIS - 14

Again, this type of analysis is necessary prior to the agency's decision – not after the fact. At the very least, the EIS could list potential disposal sites and analysis impacts related to each in the range of alternatives described and analyzed by the EIS.

The above comments demonstrate that both the GEIS and the Ross ISR Project SEIS are inadequate pursuant to NEPA, the NRC's regulations implementing NEPA, and the Council on Environmental Quality regulations implementing NEPA. The NRC must withdraw the Ross ISR Project SEIS, significantly amend it to address the deficiencies described above and re-issue the SEIS for public comment. Further, the NRC should not rely on the GEIS for any aspect of site-specific analysis.

Thank you for your time and consideration of these comments.



Shannon Anderson
Powder River Basin Resource Council
934 N. Main St.
Sheridan, WY 82801
(307) 672-5809
sanderson@powderriverbasin.org